UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,309	12/23/2003	Alexander A. Maltsev	P-5910-US	5554

49444 7590 01/09/2008	EXAMINER
PEARL COHEN ZEDEK LATZER, LLP 1500 BROADWAY, 12TH FLOOR NEW YORK, NY 10036	LIU, BEN H

ART UNIT	PAPER NUMBER
2616	

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01/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/743,309	MALTSEV ET AL.
	Examiner	Art Unit	
	Ben H. Liu	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _11 December 2007_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-9,11-29,31-40 and 42-45_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-9,11-29,31-40 and 42-45_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   This office action is in response to an amendment/response filed on December 11, 2007.

2.   Claims 1-6, 8-9, 12-26, 28-29, 32-37, and 39-40 have been amended.

3.   Claims 10, 30, and 41 have been cancelled.

4.   Claims 43-45 have been added.

5.   Claims 1-9, 11-29, 31-40, 42-45 are currently pending.

Claim Rejections - 35 USC § 102

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

7.   Note: The phrase "adapted to" recited in claims 3-5, 23-25 and 34-36 are not positively

recited claim limitations. Therefore, the limitations after the phrase are not considered the claim

limitation. It is suggested that the applicant remove the phrase. However, the reference cited

teaches the subject matter following the phrase.

8.   Claims 1-4, 6-15, 17-18, and 20-38 are rejected under 35 U.S.C. 102(e) as being

anticipated by Ryan (U.S. Patent 7,065,036).

For claims 1, 13, 21 and 32, Ryan discloses an apparatus, method and system comprising

a data packet generator to generate a data packet including a compatibility preamble field *(see*

column 6 lines 46-53, which recite a preamble field used for compatibility functions such as

automatic gain control and timing acquisition), two or more training fields *(see column 6 lines*

46-53, which recite training fields), a physical layer convergence protocol header that includes

bit and power loading information *(see column 6 lines 54-56 and column 7 lines 1-12, which*

recite a physical layer convergence protocol field containing parameters for bit information as

well as null bits that can be used for power loading information for use by the model gain

control interface in radio control 321), and a dipole antenna to transmit the data packet *(see*

column 4 lines 16-26, which recite at least one antenna).

For claims 2, 22, 33, and 43, Ryan discloses an apparatus, method and system comprising

a data packet generator to generate a data packet including a compatibility preamble field,

wherein the compatibility preamble field is subdivided into a short combined preamble, a long

combined preamble, and a combined signal field *(see column 6 lines 46-53, which recite a*

preamble field further sub-divided into a combination of short and long training sequences)

For claims 3, 14, 23, and 34, Ryan discloses an apparatus, method and system comprising

a data packet generator to generate a data packet including a compatibility preamble field,

wherein the short combined preamble comprises two or more short preambles adapted to be

transmitted over two or more neighboring sub-channels, and wherein at least one of the two or

more short preambles is phase rotated relative to the other short preambles *(see column 6 lines*

46-53 and column 7 lines 58-64, which recite a short preamble that is transmitted through a sub-carrier as a phase-rotated orthogonal frequency division multiplexing symbol).

For claims 4, 15, 24, and 35, Ryan discloses an apparatus, method and system comprising a data packet generator to generate a data packet including a compatibility preamble field, wherein the long combined preamble comprises two or more long preambles adapted to be transmitted over two or more neighboring sub-channels, and wherein at least one of the two or more long preambles is phase rotated relative to the other long preambles *(see column 6 lines 46-53 and column 7 lines 58-64, which recite a long preamble that is transmitted through a sub-carrier as a phase-rotated orthogonal frequency division multiplexing symbol).*

For claims 5, 16, 25, and 36, Ryan discloses an apparatus, method and system comprising a data packet generator to generate a data packet including a compatibility preamble field, wherein the combined signal field comprises two or more signal fields adapted to be transmitted over two or more neighboring sub-channels, and wherein at least one of the two or more signal fields is phase rotated relative to the other signal fields *(see column 6 lines 46-53 and column 7 lines 58-64, which recite a combination of a short and long preamble that is transmitted through a sub-carrier as a phase-rotated orthogonal frequency division multiplexing symbol).*

For claims 6, 26, and 37, Ryan discloses an apparatus, method and system comprising a data packet generator to generate a data packet including a two or more training fields, wherein the two or more training fields comprise a prefix training field and a postfix training field, both fields having substantially the same format *(see column 6 lines 46-53, which recite two or more long or short training fields that can be positioned as a pre-fix or post-fix field).*

For claims 7, 17, 27, and 38, Ryan discloses an apparatus, method and system comprising a data packet generator to generate a data packet including a two or more training fields, wherein the data packet comprises at least one data field fragmented into two or more fragments separated by at least one middle-fix training field *(see column 6 lines 46-67, which recite parameter data that can be divided by middle-fix positioned training fields)*.

For claims 8, 28, and 39, Ryan discloses an apparatus, method and system comprising a data packet generator to generate a data packet including a two or more training fields, wherein the two or more training fields further comprises a middle-fix training field having substantially the same format as the prefix training field and the postfix training field *(see column 6 lines 46-53, which recite two or more long or short training fields that can be positioned as a middle-fix field)*.

For claims 9, 18, 29, and 40, Ryan discloses an apparatus, method and system comprising a data packet generator to generate a data packet, comprising a modulator to modulate a first of the two or more fragments using a first modulation scheme and a second of the two or more fragments using a second modulation scheme *(see column 4 lines 4-15, which disclose a set of modulation schemes)*.

For claims 11, 19, 31, and 42, Ryan discloses an apparatus, method and system comprising a data packet generator to generate a data packet comprising an encoder to encode a first fragment of the two or more fragments by a first code and a second fragment of the two or more fragments by a second code *(see column 7 lines 28-37, which recite encoding data strings that represent a data packet. The code can be modified by adjusting the coding rate using a puncturing procedure)*.

For claims 12, 20, 44, and 45, Ryan discloses an apparatus, method and system

comprising a data packet generator to generate a data packet including a two or more training

fields, wherein at least one of the two or more training fields is adapted to provide long term

channel predication *(see column 3 lines 41-51, which recite a training sequence that provides*

channel estimation).

Response to Arguments

9.   Claims 1-42 were previously rejected under 35 U.S.C. 101. As indicated in the

telephonic interview conducted on October 24, 2007, the examiner has reconsidered and

withdrawn the rejections under 35 U.S.C. 101.

10.   Claims 1-9, 11-29, 31-40,.42-45, even if amended to overcome the previously cited

rejections, are not allowable because the limitations are taught by Ryan. Claims 1-9, 11-29, 31-

40, 42-45 are presently rejected under 35 U.S.C. 102 (e) as being anticipated by Ryan.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. *(see form PTO-892).*

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ben H. Liu whose telephone number is (571) 270-3118. The

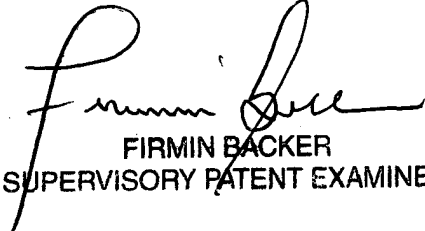examiner can normally be reached on 9:00AM to 6:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Firmin Backer can be reached on (571) 272-6703. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BL

FIRMIN BACKER
SUPERVISORY PATENT EXAMINER